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EXAMINER

STRONCZER, RYAN S

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/802,043	Applicant(s) SIE ET AL.	
	Examiner Ryan Stronczer	Art Unit 4157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 20-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 20-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed 16 January 2008 have been fully considered but they are not persuasive.

Applicant alleges (Remarks, page 8) that Swart et al. fails to teach the claimed limitations: *"video conversion information changes dynamically throughout the program"* (Claim 2) and *"the information guides conversions that change at least once during the video program"* (Claim 13).

Examiner respectfully disagrees.

With respect to claims 2 and 13, Swart teaches a method of multimedia content distribution in which content and its metadata is streamed to the user's decoder (e.g., a set top box or personal computer) as depicted in Fig. 1-4 and their respective descriptions. The aspect ratio conversion (ARC) information would be included in the metadata associated with the program content and any conversions to aspect ratio, format, etc are performed as the data is received by the decoder. Thus, the ARC information in the content metadata would continuously change in accordance to the change in video contents.

Applicant further alleges that although "Swart may include metadata including format information, there is no indication that aspect ratio formatting on the set top box uses that information in its algorithm. This argument is irrelevant since the merit has not been positively claimed. Furthermore, applicant's specification discloses that the aspect ratio conversion may be done at the user's set top box or at a location remote to the user's STB. Hence, this is consistent with Swart (figs. 1-4).

With respect to Claim 6, applicant alleges that the recited, "*non-linearly scaling a portion of the video program*" is "an advanced feature" (Remarks/Arguments pg. 9) that is not taught by Swart.

Examiner respectfully disagrees.

With respect to non-linear scaling, applicant's specification teaches, "...such that one portion of the 4:3 aperture 1012 is scaled more than another portion" [0053].

Examiner maintains that the ability to scale a portion of a video program differently from a different portion is within the capability of Swart because that is the essence of aspect ratio conversion. Hence, non-linearly scaling as claimed is not an advanced feature, but rather a feature within the teaching scope of Swart.

Applicant further alleges that Swart, "seems completely cumulative with the prior art techniques described in the background of the application show in FIGs. 1-8...Likely Swart does a vertical/horizontal stretch or letter/pillar boxing in its format conversion as is common in the prior art" (Remarks/Arguments pg. 8).

Examiner respectfully disagrees.

As cited in the previous Office Action, paragraph 0064 of Swart teaches that decoding of a content file and its metadata may comprise, "...frame rate translation of video content, video aspect ratio format conversion (e.g., 4x3 television or 16x9 movies), and any required audio and/or video processing." Thus, Examiner maintains that "*rotating or mirroring a portion of the video program*" (Claim 7) is a video processing technique that is well within the teaching scope of Swart.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Swart et al. (Pub. No.: US 2003/0025832).

Claims 1-8, 10-11, 13-14 are rejected for the same reasons as set forth in the last Office Action.

Amended Claim 9 recites, "*A tangible computer-readable medium having computer-executable instructions for performing the computer-implementable method for processing a video program of claim 1.*" As applied to claim 9 in the previous Office Action, Fig. 1-4 of Swart teach a multimedia content distribution system which requires a "digital communication network" [0022]. The recited medium and instructions are inherent in a digital communication network.

Amended Claim 12 recites the method of claim 10, "*wherein the information further comprises a piece of information that guides conversion between the first aspect ratio and a third aspect ratio.*" The decoder taught by Swart, "...decodes the incoming data and may extract digital and/or analog data representing the content and its metadata" [0058]. As discussed above in the response to applicant's arguments, the

decoder will perform conversions and/or audio/video processing as directed by the content metadata.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swart et al. as applied to claim 1 above, and further in view of Yamauchi et al. (US Patent No.: 5,907,659) and Patten et al. (US Patent No.: 7,061,552).

Claim 20 recites the method of claim 1 wherein, *"the video conversion information includes information regarding apertures and manipulations associated with modification from the first aspect ratio to the second aspect ratio."* According to applicant's specification, the term aperture refers to the portion of a video program displayed when the program is converted to a different aspect ratio, as depicted by elements 1012 and 1112 in Fig. 10 and 11, respectively. Regarding element 1012, applicant's specification discloses, "With reference to Fig. 10...the 16:9 aspect ratio image 200 is shown with an 4:3 aspect ratio aperture or cutout 1012 overlaid thereon. The video image 200 is received in a 16:9 aspect ratio, but then processed by the video converter 920 to only display a portion corresponding to the 4:3 aperture 1012" [0049].

As stated in the previous Office Action, Swart teaches the method of claim 1 including the use of metadata to facilitate conversion from a first aspect ratio to a second aspect ratio, but does not explicitly teach that such metadata could include information regarding apertures and manipulations as recited in claim 20. Yamauchi teaches a method which includes converting a video image from a first aspect ratio to a second aspect ratio. In Fig. 1B, an original image in a 16:9 aspect ratio is converted into a 4:3 aspect ratio. The dashed lines overlaid on the 16:9 image in Fig. 1 would be the equivalent of aperture 1012 shown in Fig. 10 of the instant application. Fig. 1B of Yamauchi further teaches that only the portion of the 16:9 image corresponding with the overlay is displayed in the converted 4:3 image. Conversely, Fig. 1C of Yamauchi teaches a method for converting from an original 4:3 aspect ratio to a 16:9 aspect ratio. As to the recited, "*manipulations*," Patten teaches a method of aspect ratio conversion in which the region of the original image to be displayed is shifted and stretched to ensure that the new aperture is centered when displayed in the second aspect ratio (Fig. 6-9). The techniques taught by Patten would be equivalent to the recited manipulations in Claim 20. In light of Yamauchi's and Patten's disclosures, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the overlay method taught by Yamauchi and the manipulations taught by Patten to accomplish the aspect ratio conversion taught by Swart. This would have been desirable so as to ensure users of Swart's system that videos originally in different aspect ratios would be properly displayed on the user's display device.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swart et al. as applied to claim 1 above, and further in view of Shigetomi (US Patent No.: 6,169,568).

Claim 21 recites the method of claim 1 wherein, *"the video conversion information specifies different transformations for different portions of the video program."* As stated in the previous Office Action, Swart teaches the method of claim 1 including the use of metadata to facilitate conversion from a first aspect ratio to a second aspect ratio, but does not explicitly teach that the metadata could specify different actions for different portions of the video program as claimed. Shigetomi teaches, "An entertainment system wherein a video image and an image containing icons, both having an aspect ratio of 4:3, are displayed on a display screen with an aspect ratio of 16:9 in such a manner that they do not overlap each other" [ABST]. This functionality is depicted in Figs. 5-6 in which a 4:3 video program and control icons are converted to a 16:9 display. In this embodiment, the video program and icons are each scaled differently so as not to overlap when displayed on the 16:9 screen. It would have been obvious to one of ordinary skill at the time of the invention to modify the metadata taught by Swart to incorporate the method taught by Shigetomi to convert individual portions of a video program without overlapping. This would have been desirable so as to display a program such as a 24-hr news channel which has a main broadcast and a news ticker running across the bottom.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swart et al. as applied to claim 1 above, and further in view of Duffield et al. (US Patent No.: 5,461,427).

Claim 22 recites the method of claim 1 wherein, *"the video conversion information chooses from various video streams of the video program as playback occurs."* As stated in the previous Office Action, Swart teaches the method of claim 1 including the use of metadata to facilitate conversion from a first aspect ratio to a second aspect ratio, but does not explicitly teach the use of multiple video streams of the program. Duffield teaches that the same program may be simultaneously broadcast (simulcast) in both NTSC and HDTV standards so to accommodate viewers with NTSC-compatible televisions as well as users with HDTV sets. Duffield teaches that such simulcasting is necessary to service users of both standards because, "the HDTV system uses a 16:9 aspect ratio while the NTSC system has a 4:3 aspect ratio, the HDTV system will have 1125 television scan lines while the NTSC system has only 525" (Col. 1). Duffield further teaches a receiver which can receive and process both NTSC and HDTV signals and, "includes a controller responsive to user input for associating a single label with a pair of television channels, one being an NTSC-signal carrying channel, and the other being an HDTV-signal carrying channel" (Col. 2). Figs. 2a and 2b of Duffield show the same program displayed in both the 16:9 and 4:3 aspect ratios, respectively. As simulcasting the same video program in multiple formats to accommodate viewers with different display types was known in the art of video distribution, it would have been obvious to one of ordinary skill at the time of the

invention to stream or broadcast the same program in multiple aspect ratios or display formats to allow users with different display capabilities to enjoy the same program. As Duffield's disclosure was published in 1995, it does not refer specifically to embodying video programs in a "content stream" as taught by Swart and the instant application; however, transmitting a video program in a content stream is an application of existing technologies that would have been obvious to one of ordinary skill in the art at the time of the invention.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swart et al. as applied to claim 10 above, and further in view of Yamauchi et al. (US Patent No.: 5,907,659).

Claim 23 recites the system of claim 10, wherein, *"the video converter chooses portions of the information to use based upon the second aspect ratio."* As stated in the previous Office Action, Swart teaches the distribution system of claim 10, but does not explicitly teach that the decoder chooses specific portions of the information to use, as recited. As applied above to claim 20, Yamauchi teaches a method including aspect ratio conversion in which the final converted image only displays a portion of the original image (see Fig. 1B). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the method taught by Yamauchi to accomplish the aspect ratio conversion taught by Swart, which would have necessarily included the claimed functionality.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swart et al. and further in view of Shigetomi.

Claim 24 recites *"A method for processing a video program having a first aspect ratio different from a second aspect ratio of a display, the method comprising the steps of: specifying video conversion information for the video program at a first location...transmitting the video program having the first aspect ratio and the video conversion information to a second location geographically away from the first location wherein the video configuration information is configured to cause processing of the video program with the video conversion information at the second location to conform with the second aspect ratio."* As applied to claims 1 and 10 in the previous Office Action, Swart teaches a method of "encod[ing] content metadata and programs for delivery to the user...[wherein] the complete program content file may also include a reference content or other metadata...[including] format (e.g., 4x3 television or 16x9 movies)" [0019-0020]. Fig. 1-4 of Swart teach a distribution system in which the content is delivered via a wide area network to a user at a geographically different location. As applied to claim 1 in the previous Office Action, paragraph [0064] of Swart teaches that the decoder uses the metadata associated with the program content to facilitate various conversion procedures, including aspect ratio conversion.

The first step of the method recited in claim 24, *"specifying video conversion information for the video program at a first location,"* is further limited as such: *"...wherein: [1] the video conversion information can be used to modify display of the video program over time for the display; [2] the video conversion information comprises*

first manipulation information and second manipulation information; [3] the first manipulation information specifies transformations relevant to a first portion of the video program; [4] the second manipulation information specifies transformations relevant to a second portion of the video program...” With regard to [1], the decoder taught by Swart decodes the metadata associated with a video program and performs aspect ratio conversion (ARC) and any other audio/video processing as directed by the metadata as said metadata is received. Thus it is obvious that if the instructions conveyed by the metadata regarding ARC, etc change during the course of the video program that the decoder will enact such changes and thus change the information output to the user's display device as directed by the metadata.

With respect to [2-4], as applied above to claim 21, Shigetomi teaches a method of converting an image in which a video image and a image containing icons a separately converted from a 4:3 aspect ratio to a 16:9 aspect ratio so that the video image and icons are “displayed on a display screen with an aspect ratio of 16:9 in such a manner that they do not overlap each other” [ABST]. The video image and icons are equivalent to the first and second portions of the video program as recited in claim 24. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the metadata taught by Swart to incorporate the method taught by Shigetomi to convert individual portions of a video program as required by the program.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Info

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Stronczer whose telephone number is (571) 270-3756. The examiner can normally be reached on 7:30 AM - 5:00 PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on (571) 272-7332. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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